

IN THE CLAIMS:

Please amend the claims as follows.

Claim 11 (Currently Amended): A recording medium comprising:

a first area including meandering groove tracks on which the recording information is to be recorded; and

a second area where a phase pit string corresponding to control data is arranged meanderingly,

wherein the meandering amplitude of the second area is different from the meandering amplitude of the first area,

~~wherein all pits forming the phase pit string have identical widths in a direction perpendicular to a meandering line formed by the phase pit string~~

wherein the recording medium further comprises a third area where a phase pit string corresponding to predetermined data is arranged meanderingly, wherein the meandering amplitude of the third area is different from at least one of either the meandering amplitude of the first area or the meandering amplitude of the second area, and

wherein the meandering amplitude or a pit depth of the third area is different from the meandering amplitude or a pit depth of the second area.

Claim 12 (Previously Presented): The recording medium according to claim 11, wherein the phase pit string in the second area has a pit depth so that it enables the control data to be read and reading of other data overwritten on the phase pit string is prevented.

Claim 13 (Cancelled).

Claims 14 (Currently Amended): The recording medium according to claim 11 [[13]], wherein the meandering amplitude of the second area and the meandering amplitude of the third area are set so that output levels of wobble signals extracted from the respective areas are approximately equal to an output level of a wobble signal extracted from the first area.

Claims 15 (Currently Amended): The recording medium according to claim 11 [[13]], wherein: the third area includes pre-pits including address information representing a recording position on the recording medium formed adjacent to the phase pit string; and the phase pit string in the third area has a pit depth so that it enables the pre-pits to be read and reading of other data overwritten on the phase pit string is prevented.

Claims 16 (Currently Amended): The recording medium according to claim 11 [[13]], wherein pre-pits including address information representing a recording position on the recording medium are formed on the first area and the third area.

Claims 17 (Currently Amended): The recording medium according to claim 11 [[13]], wherein a pit depth on the third area is set so as to be equal to a depth of the groove tracks of the first area.

Claims 18 (Currently Amended): The recording medium according to claim 11 [[13]], wherein on the first area, a depth of the groove tracks is set to not less than 20 nm and to not more than 35 nm, on the second area, a pit depth is set to not less than 60 nm and to not more than 90 nm, and on the third area, a pit depth is set to not less than 20 nm and to not more than 35 nm.

Claims 19 (Previously Presented): The recording medium according to claim 18, wherein on the first area, the depth of the groove tracks is set to 30 nm, on the second area, the pit depth is set to 80 nm, an average duty of the pit string is set to approximately 50%, and the meandering amplitude is set to be approximately 2.7 times as much as that of the first area, and on the third area, the pit depth is set to 30 nm, an average duty of the pit string is approximately 80%, and the meandering amplitude is set to be approximately 1.3 times as much as that of the first area.

Claims 20 (Currently Amended): The recording medium according to claim 11 [[13]], wherein the meandering amplitude of the third area is set so as to be equal to the meandering amplitude of the first area.

Claims 21 (Currently Amended): The recording medium according to claim 11 [[13]], wherein on the first area, a depth of the groove tracks is set to 30 nm, on the second area, a pit depth is set to 80 nm, an average duty of the pit string is set to approximately 50%, and the meandering amplitude is set so as to be approximately 2.7 times as much as that of the first area,

and on the third area, a pit depth is set to 50 nm, an average duty of the pit string is set to approximately 80%, and the meandering amplitude is set to be equal to that of the first area.

Claim 22 (Currently Amended): A recording medium producing apparatus for producing a recording medium, using a disc master, comprising:

 a first area forming device which cuts groove tracks meanderingly on the disc master using a light beam modulated by a wobble signal so as to form a first area onto which the recording information is to be recorded; and

 a second area forming device which meanderingly cuts a phase pit string corresponding to control data on the disc master, thereby forming the second area,

 wherein in the second area forming device, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude of the second area is different from the meandering amplitude of the first area,

 wherein the second area forming device cut the phase pit string so that all pits forming the phase pit string have identical widths in a direction perpendicular to a meandering line formed by the phase pit string

wherein the recording medium producing apparatus further comprises a third area forming device which meanderingly cuts a phase pit string corresponding to predetermined data on the disc master, thereby forming a third area,

wherein in the third area forming device, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude of the third area is different

from at least one of either the meandering amplitude of the first area or the meandering amplitude of the second area, and

wherein in the third area forming device, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude or a pit depth of the third area is different from the meandering amplitude or a pit depth of the second area.

Claim 23 (Previously Presented): The recording medium producing apparatus according to claim 22, wherein the second area forming device forms the second area so that the phase pit string in the second area has a pit depth which enables the control data to be read and prevents reading of other data overwritten on the phase pit string.

Claim 24 (Cancelled).

Claims 25 (Currently Amended): The recording medium producing apparatus according to claim 22 [[24]], wherein in the second area forming device and the third area forming device, a degree of modulation of the light beam for cutting the phase pit string is set so that the output levels of wobble signals extracted from the respective areas are approximately equal to an output level of the wobble signal extracted from the first area at the time of reproduction from the recording medium produced by using the disc master.

Claims 26 (Currently Amended): The recording medium producing apparatus according to claim 22 [[24]], wherein the first area forming device and the third area forming device form pre-pits.

Claims 27 (Currently Amended): The recording medium producing apparatus according to claim 22 [[24]], wherein the third area forming device forms the third area so that the phase pit string in the third area has a pit depth which enables the pre-pits to be read and prevents reading of other data overwritten on the phase pit string.

Claim 28 (Currently Amended): A recording medium producing method for producing a recording medium, using a disc master, comprising:

a first area forming process of cutting groove tracks meanderingly on the disc master using a light beam modulated by a wobble signal so as to form a first area onto which the recording information is to be recorded; and

a second area forming process of meanderingly cutting a phase pit string corresponding to control data on the disc master, thereby forming a second area,

wherein at the second area forming process, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude of the second area is different from the meandering amplitude of the first area,

~~wherein the second area forming process cuts the phase pit string so that all pits forming the phase pit string have identical widths in a direction perpendicular to a meandering line formed by the phase pit string~~

wherein the recording medium producing method further comprises a third area forming process of meanderingly cutting a phase pit string corresponding to predetermined data on the disc master, thereby forming a third area,

wherein in the third area forming process, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude of the third area is different from at least one of either the meandering amplitude of the first area or the meandering amplitude of the second area, and

wherein in the third area forming process, a degree of modulation of the light beam for cutting the phase pit string is set so that the meandering amplitude or a pit depth of the third area is different from the meandering amplitude or a pit depth of the second area.

Claim 29 (Previously Presented): The recording medium producing method according to claim 28, wherein at the second area forming process, the second area is so formed that the phase pit string in the second area has a pit depth which enables the control data to be read and prevents reading of other data overwritten on the phase pit string.

Claim 30 (Cancelled).

Claims 31 (Currently Amended): The recording medium producing method according to claim 28 [[30]], wherein at the second area forming process and the third area forming process, a degree of modulation of the light beam for cutting the phase pit string is set so that the output levels of wobble signals extracted from the respective areas are approximately equal to an output

level of the wobble signal extracted from the first area at the time of reproduction from the recording medium produced by using the disc master.

Claims 32 (Currently Amended): The recording medium producing method according to claim 28 [[30]], wherein at the first area forming process and the third area forming process pre-pits are formed.

Claims 33 (Currently Amended): The recording medium producing method according to claim 28 [[30]], wherein at the third area forming process the third area is so formed that the phase pit string in the third area has a pit depth which enables the pre-pits to be read and prevents reading of other data overwritten on the phase pit string.

Claim 34 (Cancelled).

Claim 35 (Previously Presented): The recording medium according to claim 11, wherein the phase pit string in the second area has a pit depth different from a depth of each track of the meandering groove tracks in the first area.

Claim 36 (Previously Presented): The recording medium producing method according to claim 28, wherein the second area forming process forms the second area so that the phase pit string in the second area has a pit depth different from a depth of each track of the meandering groove tracks in the first area.

Claim 37 (Cancelled).